

CLAIMS

1. A sealing material for liquid crystals comprising: (A) as a curing resin a mixture of (a) an epoxy group-containing curing resin and (b) a (meth)acryloyl group-containing curing resin, or (c) a curing resin containing an epoxy group and a (meth)acryloyl group; (B) a radical-forming photopolymerization initiator; (C) an isophthalic acid dihydrazide having an average particle diameter of $3\mu\text{m}$ or smaller; and (D) a filler having an average particle diameter of $3\mu\text{m}$ or smaller.

2. The sealing material for liquid crystals according to claim 1, wherein (b) (meth)acryloyl group-containing curing resin is (meth)acrylate of difunctional or more epoxy resin.

3. The sealing material for liquid crystals according to claim 1, wherein (c) curing resin containing an epoxy group and a (meth)acryloyl group is a partial (meth)acrylate of difunctional or more epoxy resin.

4. The sealing material for liquid crystals according to claim 3, wherein the partial (meth)acrylate of difunctional or more epoxy resin is obtained by subjecting a difunctional or more epoxy resin to an esterification reaction with a (meth)acrylic acid of 20 to 80% equivalent of the epoxy group.

5. The sealing material for liquid crystals according to any one of claims 2 to 4, wherein the difunctional or more epoxy resin is a bisphenol-type epoxy resin.

6. The sealing material for liquid crystals according to

claim 5, wherein the bisphenol-type epoxy resin is a bisphenol A-type epoxy resin.

7. The sealing material for liquid crystals according to any one of claims 1 to 6, wherein (B) radical-forming photopolymerization initiator is a carbazole-based initiator.

8. The sealing material for liquid crystals according to any one of claims 1 to 6, wherein (B) radical-forming photopolymerization initiator is an acridine-based initiator.

9. The sealing material for liquid crystals according to any one of claims 1 to 8, wherein (D) filler having an average particle diameter of 3 μ m or smaller is an inorganic filler, and a content of the inorganic filler is in a range from 5 to 40% by weight in the sealing material for liquid crystals.

10. The sealing material for liquid crystals according to any one of claims 1 to 9, further comprising (E) a silane coupling agent.

11. The sealing material for liquid crystals according to claim 10, wherein (E) silane coupling agent contains an amino group.

12. The sealing material for liquid crystals according to any one of claims 1 to 11, further comprising (F) a core-shell structural cross-linking rubber.

13. A liquid crystal display cell which is sealed with a cured product of the sealing material for liquid crystals according to any one of claims 1 to 12.

14. A method for manufacturing a liquid crystal display cell constituted by two substrates, comprising: dropping a liquid

crystal inside a bank of a sealing material for liquid crystals according to any one of claims 1 to 12, which is formed on one of the substrates; thereafter bonding the other substrate thereto; and curing the material.